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EXAMINER

NGUYEN, HUNG THANH

ART UNIT PAPER NUMBER

2841

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/653,029

Applicant(s)

GARNETT ET AL.

Examiner

HUNG T. NGUYEN

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14/3/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 33-40 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 42 is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☒ Claim(s) 41 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaetsu et al. (US 6,643,141) in view of Doblar et al. (US 6,922,342) and Kaplan et al. (US 6,680,904) and Branscomb (US 6,930,890).

**Regarding claim 1, 32:** Doblar disclose the switching modules (800A-800E) of the respective shelves in each stack being interconnected in a logical stacking configuration. Doblar et al. does not disclose a computer system comprising: a plurality of shelves, each shelf having a carrier for removably receiving a plurality of information processing modules and a switching module, and a interconnection member for providing connections between the information processing modules and the switching module; wherein the shelves are logically connected into a plurality of stacks and the master switching module is connected into each stack as a common master switch for all of the stacks.

Kaetsu discloses, a computer system comprising: a plurality of shelves (plurality of vertical shelves, see figure 1) each shelf (each vertical shelf) having a carrier (111, see figure 2) for removably receiving a plurality of information processing modules and a switching module, and a interconnection member (130) for

Art Unit: 2841

providing connections between the information processing modules and the switching module; wherein the shelves (plurality of vertical shelves) are logically connected into a plurality of stacks (shelves appear to connect into stack).

Kaplan et al. discloses a master switching module (element 30, see figure 3), wherein the master switching module (element 30, see figure 3) is connected into each stack as a common master switch (elements 34, 37, 39) for all of the stacks.

Doblar, Kaetsu and Kaplan et al. are analogous art because they are from the same field of endeavor to make computer system.

Therefore, it would have been obvious for one ordinary skill in the art at the time of the invention to make computer system of Doblar et al. to have master switch as taught by Kaplan et al. for the benefit of controlling the external interface.

**Regarding claim 2, 25, 28, 29, 31:** Doblar et al. discloses in figure 2, the logical stacking configuration is a closed loop (data network 140, 150 appears to be close loop) stacking configuration.

**Regarding claim 3, 4:** Doblar et al. discloses all elements of the computer system as described above with respect to claim 1, Doblar does not disclose each switching module other than the master switching module is operable as a slave switching-module responsive to the masters witching module.

Kaplan et al. discloses in figure 3, each switching module (36, 37, 39) other than the master switching module is operable as a slave switching-module responsive to the masters witching module.

Art Unit: 2841

Doblar and Kaplan et al. are analogous art because they are from the same field of endeavor to make computer system.

Therefore, it would have been obvious for one ordinary skill in the art at the time of the invention to make computer system of Doblar et al. to have switching module to operate as a slave switching-module as taught by Kaplan et al. for the benefit of interface with external device.

**Regarding claim 5:** Doblar et al. discloses all elements of the computer system as described above with respect to claim 1 except, Doblar et al. does not disclose the master switching module provides a single ingress/egress point for data transfer to/from the computer system.

However it is old and well known for one ordinary skill in the art to provide a single ingress/egress to transfer data back and forth in the computer system.

Therefore, it would have been obvious for one ordinary skill in the art at the time of the invention to use ingress/egress for the benefit of transfer signals.

**Regarding claim 6:** Doblar et al. discloses in figures 10-11B, computer system wherein the information processing modules (1010A-D) of each shelf (explain in claim 1) are located at a first side (1010A-D on the right side) of the interconnections member (explain in claim 1) and the switching module (800A-E) is located at the second side (800A-E, located on the left side) of the interconnections member (explain in claim 1) and wherein a power supply module (900A-B) for providing power to the modules is removably received in the shelf (explain in claim 1) located at the second side (800A-E) of the interconnections member (explain in claim 1).

Art Unit: 2841

**Regarding claim 7:** Doblar et al. discloses all elements of the computer system as described above with respect to claim 1, Doblar does not disclose the shelf of the master switching module has no information processing modules.

Kaplan et al. discloses the shelf of the master switching module (it appears in figure 2 that master switch does not contain the processor) has no information processing modules.

Doblar and Kaplan et al. are analogous art because they are from the same field of endeavor to make computer system.

Therefore, it would have been obvious for one ordinary skill in the art at the time of the invention to make master switch of Doblar et al for not having information on processing module as taught by Kaplan et al. for the benefit of reducing cost.

**Regarding claim 8:** Doblar et al. discloses in figures 10-11B, the computer system wherein the master switching module (explain in claim 1) is located at a first side (explain in claim 6) of the interconnections member (explain in claim 1) and the power supply module (explain in claim 6) is located at a second side (explain in claim 6) of the interconnections member (explain in claim 1).

**Regarding claim 9, 10, 11:** Doblar et al. discloses in figures 10-11B, the computer system wherein each shelf (explain in claim 1) has a service processing module (see column 8-12, lines 41 to end) removably received therein for providing shelf (explain in claim 1) level service functions to the modules of the shelf (explain in claim 1).

Art Unit: 2841

**Regarding claim 12:** Doblar discloses all elements of the computer system as described above with respect to claim 1, Doblar does not disclose each shelf comprises two switching modules removably received therein.

However, it is old and well known for one ordinary skill in the art to have 2 modules in one shelf for the benefit of having more space.

Therefore, it would have been obvious for one ordinary skill in the art at the time of the invention to make device of Doblar to have 2 modules in one shelf for the benefit of having more spaces.

**Regarding claim 13, 14, 15, 18, 19:** Doblar discloses in figures 10-11B, the computer system wherein both switching modules of each shelf (explain in claim 1) are connected into a common logical stacking arrangement (see figures).

**Regarding claim 16, 17:** Doblar et al discloses in figures 10-11B, the computer system wherein each switching module of a given shelf is operable to replicate the functionality of the other switching module of that shelf (see figures 2).

**Regarding claim 20:** Doblar et al discloses all elements of the computer system as described above with respect to claim 1, Doblar does not disclose the computer system wherein the switching module has a second master switching module shelf having the master.

Kaplan et al. discloses in figure 3, the computer system wherein the shelf having the master switching module (30) has a second master switching module (32).

Doblar and Kaplan et al. are analogous art because they are from the same field of endeavor to make computer system.

Art Unit: 2841

Therefore, it would have been obvious for one ordinary skill in the art at the time of the invention to make computer system of Doblar et al to have second master switch as taught by Kaplan et al. for the benefit of providing protection in case of other master switch failure.

**Regarding claim 21, 22, 23, 24:** Doblar et al. discloses all elements of the computer system as described above with respect to claim 1, Doblar et al. does not disclose the computer system wherein each master switching module is connected into a separate one of the local stacking arrangements.

Kaplan et al. discloses in figure 3, the computer system wherein each master switching module (30, 32) is connected into a separate one of the local stacking arrangements (see figure 2).

Doblar and Kaplan et al. are analogous art because they are from the same field of endeavor to make computer system.

Therefore, it would have been obvious for one ordinary skill in the art at the time of the invention to make computer system of Doblar et al. to connect into separate stack as taught by Kaplan et al. for the benefit of providing protection in case other switch failure.

**Regarding claim 26, 27, 30:** Doblar et al. discloses all elements of the computer system as described above with respect to claim 1, Doblar et al. does not disclose the computer system wherein each switching module comprises at least one switch fabric chip and a controlling microprocessor, and wherein the functionality of each forwarding element is performed by a switch fabric chip and



Art Unit: 2841

the functionality of the controlling element is performed by the same switch fabric chip and the controlling microprocessor in combination.

However, it is old and well known for one ordinary skill in the art to combine switch and processor in one module for the benefit of saving space and less cost. Therefore, it would have been obvious for one ordinary skill in the art at the time of the invention to combine switch and processor for the benefit of saving space and cost reduction.

### ***Allowable Subject Matter***

Claim 41 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 42 are allowed.

**Regarding claim 42:** Kaplan discloses in figure 3, a master shelf (30) including a carrier (Kaplan does not disclose the guide to removable the module but it is old and well known for one ordinary skill in the art to make guides to receive/remove the modules, see claim 1) configured to removably receive two master switching modules, wherein each of the master switching modules (30, 30) is connected into each stack (36, 37, 39) as a common master switch for all of the stacks, wherein a first master switching module (36) is connected to a first switching module of a first shelf (34) and to a first switching module of a last shelf in each of the stacks (37, 39), Doblar and Kaplan et al. ~~does~~ not disclose a

Art Unit: 2841

second master switching module (32) is connected to a second switching module of a first shelf and to a second switching module of a last shelf in each of the stacks. Therefore, it would be no motivation to make this modification.

### Relevant Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Mahany et al. (US 6,970,434) teaches wire and wireless communication network, El-Fafie (US 6,968,394) teaches features of multicasting, master and slave facilities, Sample et al. (US 5,352,123) teaches the switching interconnection, Iny (US 6,711,028) teaches the switching device, Miller et al. (US 6,628,525) teaches telecommunication device with chassis, Kaetsu et al. (US 6,643,141) teaches the subrack with plurality modules.

### Conclusion

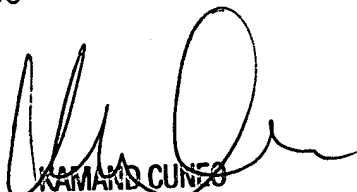
Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG T. NGUYEN whose telephone number is 571-272-5983. The examiner can normally be reached on 8:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KAMMIE CUNEO can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

HN

HUNG THANH NGUYEN

5/19/06



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